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V-Learning

Distance Education in the 21st Century Through 3D Virtual Learning Environments

Springer

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This work is dedicated to my father Michael Joseph Annetta, who left us on December 25, 2008. This untimely passing away came at the time we were completing this book. This unfortunate event delayed and almost stopped the completion of writing. However, my father instilled in me to never give up regardless of Scrappy, what I called him since I was a little boy, was amazed at the transformation of technology through his life and my work using 3D environments was just another link in the lineage of technology growth in his lifetime. Although he only earned an eighth grade education, my father instilled in me, and my siblings, the critical need for education. He would tell us that nobody could take what we put between our ears. These are words to live by for anyone who reads this book. Regardless of how you learn, it is the learning that will always stay with you. I will sorely miss you Scrappy and thank you for pushing me to be an upstanding, educated man and a person who can teach others the intangibles of life. God bless you!

Foreword

"Hello, I'm [Sally Doe] and I'm taking an online class with the Regents Online Degree Program [Tennessee Board of Regents, (RODP)]. I'm locked-out of my Biology course and I need to gain access immediately… I'm feeding my newborn and will have about 4 h to complete and submit my assignment before he wakes-up. Can you please help me get access immediately so that I can use this time to …?!" It was *the* definitive moment for me. A key aspect of the eLearning value proposition realized – expanding access to higher education, and specifically, to the non-traditional student. It was so exciting to see all of the strategic planning, marketing campaigns, demographic targeting, course (re)design, and tactical support converge. I thought to myself, "How rewarding is this?" And this is one of thousands of examples that followed that I (and others in this industry) could reference since the fall of 2000.

This was a time when eLearning (a form of Distance Learning) was starting to show considerable adoption rates in higher education, and the use of Course Management Systems (CMS) to facilitate the eLearning process was gaining greater traction, as institutions came to grips with the fact that the CMS was as important as the Student Information System (SIS). However, in a lot of cases, some didn't know why. Although the majority of institutions had or planned to implement a CMS in 2000, faculty adoption rates varied widely with regards to their application of this tool and eLearning in general. This was due to many factors, including the questions of eLearning efficacy, institutional culture, and pure change management to support what constituted a paradigm shift for traditional, tenured, and "seasoned" faculty members who didn't have the prerequisite technology or online pedagogy skills.

The question of hybrid versus completely online was emerging as one of the key considerations when planning an institution's online initiatives. In 2000, in my humble opinion, hybrid was a way of dipping your toe into the eLearning water without departing too far from institutional culture and allowing the institution to ride the fence, while this eLearning thing shakes out. While there were, and are today, pedagogically sound reasons for offering hybrid classes during this time. Additionally, institutions were asking themselves, is it within the mission of our institution to provide this form of learning? Well, 9 years later, I think the higher education clientele, students, are driving the answers to these questions. Although not purely consumer-driven today, institutions are certainly heeding the call.

While online enrollments continued to grow in the United States and abroad between 2000 and 2009, so did the learning technology enterprise, which has evolved and expanded to provide enhanced and new learning technologies to support the online and hybrid learner and those who teach via this medium. Today, there are upward of 20 different categories of learning technologies that are widely adopted or emerging as permanent fixtures in the higher education learning technology enterprise. For example, course management systems, ePortfolios, student information systems, learning content management systems, and 3rd party learning materials (assessments, quizzes, simulations, etc.) are all providing the online instructional designer with greater options to enhance the online learning environment.

Although not widely adopted, but certainly edging its way into the learning technology enterprise is the Virtual Learning Environment (VLE). A leader in providing VLE, Linden Labs – Second Life, reported in February of 2009 that approximately 200 universities are using Second Life for varying purposes. While CC International which promotes the application of virtual reality for educational purposes has a membership of ~4,200 participants, Second Life Educators (SLEDs), created in October of 2005, has greater than 4,700 participants in its community (e-mail list) who are interested in or actively engaging in delivering education via VLE (http://www.campustechnology.com/articles/2009/02/18/real-life-teaching-in-a-virtual-world.aspx).

So, why is the VLE early adopter community growing and what is the appeal of VLE for higher education institutions? Well, I think the answer varies based on institution-specific objectives associated with the VLE. For example, VLE is used to enhance the distance learning and bricks and mortar educational experience by providing an immersive learning experience for students. A class facilitated completely or supplemented by VLE, as described by Dr. Annetta and many other educators using this tool (K-12 and higher education), provides an environment in which students can role-play, collaborate, and provide feedback on discussion topics and peer assignments, conduct experiential learning activities, and simply create a more engaging, interactive, and fun environment ("edutainment") for student learning (http://www.youtube.com/watch?v=CWfvqkkk0yM). The use of avatars to represent the learner and faculty is an important feature of VLE as it introduces personality into the learning experience and environment. This immersive environment goes far beyond the current features and functionality offered by the CMS, which is primarily used to manage the online and hybrid learning processes, whereas the VLE actually creates an enhanced, 3D learning environment, creating greater learning stimuli for the 21st century learner, while also providing tools to manage the learning process.

Higher education institutions and K-12 schools and districts are also using VLEs for recruiting students and providing a greater sense of community for faculty, students, and other constituents such as alumni (donors). The Ernst and Young Foundation, through its competitive University Fund Grant program, has recently awarded North Carolina State University with $500,000 to continue its research and leadership activities in the area of VLE (http://www.carolinanewswire.com/news/News.cgi?database=0001news.db&command=viewone&id=711&op=) – a strong

data point that the education market sees value in the adoption and application of this form of learning.

And while the portfolio of learning technologies continues to expand, a subtle, yet crucial, change is occurring with respect to integrating these various learning technologies through the application of learning technology interoperability standards. Such standards created by the IMS Global Learning Consortium (www.imsglobal.org) enable learning technology product providers to develop their products to not only integrate with other components of the learning technology enterprise, enabling them to share/pass administrative, student, and learning data (e.g., CMS and ePortfolio integration), but also help to create integrated online environments. These interoperability-enabled learning environments enable integration of rich digital content and ancillary digital learning resources, creating and providing an enhanced learning experience. In parallel, and in some cases, in front of the learning technology enterprise evolution curve, IMS GLC has developed 20 or so interoperability standards (http://www.imsglobal.org/specifications.html), enabling integration of many of the learning technologies comprising the learning enterprise of today. K-12, HE, and Learning technology product and service providers who comprise the IMS GLC membership (http://www.imsglobal.org/members.html) and affiliates (http://www.imsglobal.org/Affiliates.html) work together to define and develop these standards so that as the market continues to evolve, products are developed to meet not only the administrative needs but the true educational or pedagogical functions of a given learning system.

It is easy to see how virtual gaming has been enhanced through technological innovation, creating enriched environments for gamers that retain their interest and excitement – and lead to greater revenues for the vendor. Establishing sound distance learning pedagogy, specifically in the VLE, is critical to guiding vendor product development, as it provides a framework for innovation, competition, and, most importantly, results in an enhanced learning environment for the student.

Dr. Annetta was one of the first adopters of VLE in distance learning and his expertise and experience in this arena are noteworthy. Hats off to Dr. Annetta for providing educators and VLE product providers with a roadmap for infusing sound pedagogy into VLE-facilitated instruction and development of new product features and functionality, respectively!

Chief Program Strategist, IMS Global Learning Consortium John Falchi

Acknowledgment

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